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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,918	07/24/2003	David P. Schneider	H-560-CIP	2407

41245 7590 11/16/2004

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EXAMINER

BASINGER, SHERMAN D

ART UNIT	PAPER NUMBER
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3617

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/626,918	Applicant(s) SCHNEIDER, DAVID P.	
	Examiner Sherman D. Basinger	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 2,3,9,12 and 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-8,10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/25/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because in line 5 of the abstract, "material" is misspelled. Correction is required. See MPEP § 608.01(b).
2. On page 1 of the specification it should be stated that the parent application, of which the instant application is a continuation in part, is now abandoned.

Oath/Declaration

3. It is noted that in the declaration applicant failed to claim benefits under 35 U.S.C. 120 for the parent application.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iler in view of GB 2 176 732 A and Schneider.

Iler discloses a rescue flotation buoy 10 which can contain both shark repellent and a knife.

GB 732 discloses a pressurized repellent material containment and dispensing device 1 having a proximal end and a distal end for serially dispensing multiple

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applications of shark repellent material, disposed at said proximal end 151 of said containment and dispensing device.

Iler does not disclose a containment and dispensing device being detachably integrated with said rescue flotation buoy 10.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to provide the buoy 10 of Iler with a knife similar to that of GB 732. Motivation to do so is found in the fact that buoy 10 of Iler can contain a knife and in that the knife of GB 732 can be used to repel sharks.

GB 732 discloses a shark repellent material in container 1-see page 2, lines 40-45.

The shark repellent material used by GB 732 is not sodium lauryl sulfate. Schneider, discloses the use of such material as a shark repellent. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to use as the shark material in the knife provided to Iler in view of GB 732 sodium lauryl sulfate in view of Schneider using such material as a shark repellent. That this chemical is harmless to humans provides ample motivation to use it as a repellent.

The low cost foamed plastic material is foam material 50 of Iler. To make this foam of foamed polystyrene, foamed polyurethane or foamed polyvinyl chloride would have been obvious at the time the invention was made to a person having ordinary skill in the

art to which said subject matter pertains. Motivation to do so is that such foams are well known closed cell foams easily attainable.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2 176 732 A in view of Schneider.

GB 732 discloses a shark repellent apparatus comprising:

a) a pressurized repellent material containment and dispensing device having a proximal end and a distal end 1; and

b) dispensing means 151 for serially dispensing multiple applications of shark repellent material, disposed at said proximal end of said containment and dispensing device.

The shark repellent material is disclosed on page 2, lines 40-45.

The shark repellent material used by GB 732 is not sodium lauryl sulfate. Schneider, discloses the use of such material as a shark repellent. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to use as the shark material in the knife provided to Iler in view of GB 732 sodium lauryl sulfate in view of Schneider using such material as a shark repellent. That this chemical is harmless to humans provides ample motivation to use it as a repellent.

7. Claims 7, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sabo in view of Kea, GB 2 176 732 A and Schneider.

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Sabo discloses a flexible flotation vest with a pocket or container for shark repellent-see column 5, lines 40-45. Sabo does not disclose his vest as being auto inflating. Kea discloses a flotation jacket which is auto inflating and which provides an area 34 for a shark repellent. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to use auto inflation structure similar to that of Kea with the vest of Sabo. Motivation to do so is to have the vest of Sabo inflate automatically when the pilot hits the water incase the pilot is unable to activate inflation of his vest.

While Sabo discloses that his vest has a container or pocket for shark repellent, Sabo does not disclose a pressurized repellent material containment and dispensing device having a proximal end and a distal end, said containment and dispensing device being detachably connected to said flotation vest; dispensing means for serially dispensing multiple applications of repellent material; and a shark repellent material disposed in said containment and dispensing device.

Note container 1 of GB 732.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to provide in the pocket or container for shark repellent of Sabo a knife similar to that of GB 732. Motivation to do so is that not only will the knife provide shark repellent, but it will provide a means for performing other forms of survival work.

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The shark repellent material used by GB 732 and Sabo is not sodium lauryl sulfate.

Schneider discloses the use of such material as a shark repellent. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to use as the shark material in the knife provided to Sabo in view of GB 732 sodium lauryl sulfate in view of Schneider using such material as a shark repellent. That this chemical is harmless to humans provides ample motivation to use it as a repellent.

With regard to claim 8, the flexible tube will be as 15 of GB 732, and the nozzle will be as 151 of GB 732.

With regard to claim 10, the grip means is as 413 of GB 732 and the dispensing valve means is as 4123 and 4124 of GB 732.

Withdrawn Claims

8. Applicant has withdrawn claims 2, 3, 9, 12 and 13. Should these claims have been canceled as opposed to being withdrawn?

Response to Arguments

9. Applicant's arguments filed October 25, 2004 have been fully considered but they are not persuasive.

10. Applicant first argues: Claims 11 and 12 were rejected under 35 U.S.C. 5102(b) as being anticipated by GB 2 176 732 A. The Examiner

states "GB 732 discloses a shark repellent apparatus comprising dispensing means 151 for serially dispensing multiple applications of repellent material." Multiple applications of specific repellent materials, including sodium lauryl sulfate, would require a significantly larger storage chamber. In fact, even one application of sodium lauryl sulfate would require more storage capacity than can be provided by a chamber within the handle of a dive knife. Unlike possible odor-based shark repellents that might create a sufficient odor cloud with a very small volume of repellent, sodium lauryl sulfate acts as a repellent by irritating the surface of the gills of a shark. A much greater volume of the sodium lauryl sulfate shark repellent is required to have this effect, than the volume of a possible odor based repellent. In the attached scientific publication entitled Surfactants as chemical shark repellents: past, present, and future. it is stated that sodium dodecyl sulfate (a synonym for sodium lauryl sulfate) "does not meet the Navy's potency requirement for a nondirectional surrounding-cloud type repellent of 100 parts per billion." (Sisneros 1) Later it is stated that "surfactants are an order of magnitude less effective than the target concentration needed for a practical (nondirectional cloud-type) repellent." (Sisneros 10) To be effective, it is clear that a device that provides multiple applications and significantly more volume would be required. Since GB 2 176 732 A could not contain enough volume of a surfactant to be effective, it is believed that GB 2 176 732 A does not anticipate the invention, and the

rejection of claim 11 of the present invention has been overcome. Therefore, Applicant respectfully traverses the rejection of claim 11 under 35 U.S.C. 5102(b) as being anticipated by GB 2 176 732 A.

This argument is not persuasive because in Schneider column 2, lines 33- 37 it is disclosed that sodium lauryl when mixed with sea water can kill a shark in only small quantities. Because sodium lauryl can kill in small quantities when mixed with sea water, the capacity chamber 11 of the knife of GB 732 can hold an amount of sodium lauryl which is sufficient to kill a shark as it will hold a small quantity of any shark repellent.

11. The argument that a diver's knife does not have the storage capacity in a knife handle to dispense even a single application of substances such as sodium lauryl sulfate with any hope of effectively repelling sharks, as described hereinabove is also non-persuasive in view of what is disclosed in Schneider column 2, lines 33-37.

12. Applicant next argues: Examiner Balinger concludes that would be obvious to "provide a buoy of ILER with a knife similar to that of GB 732." This, however, would not be effective a surfactant repellent is used. A buoy of ILER, combined with a knife of GB 2 176 732 A would therefore have an inherently different effect than described by Applicant in that it would not be able to supply sufficient repellent of the surfactant type, irritating the surface of the gills of a shark, to effectively repel the shark.

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Furthermore, a buoy of ILER would require the knife of GB 2 176 732 A to be stored within a storage chamber that is accessible by unscrewing a threaded lid. This combination would severely hinder the accessibility of attaining the knife within the buoy. In many rescue situations, there would be no time to unscrew a lid, find the knife, and use the knife all while trying to keep water out of the buoy's compartment. The invention disclosed by Applicant would not contain this flaw. Since is believed that the objection to claim 1 of the present invention has been overcome, Applicant respectfully traverses the rejection of claim I under 35 U.S.C. 5103(a) as being anticipated by ILER in view of GB 2 176 732 A.

The argument is not persuasive because it doesn't point out claimed structure patentable over the combination and because Iler discloses the use of a knife **and** shark repellent in his buoy. If Iler uses a knife and shark repellent in his buoy, than a knife containing shark repellent can obviously be placed inside the buoy.

13. Applicant next argues: Claims 3-6 were rejected under 35 U.S.C. 5103(a) as being unpatentable over ILER and GB 2 732 and further in view of SCHNEIDER. As described hereinabove, the shark repellent device used by GB 2 176 732 A cannot be coupled

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with the shark material disclosed by SCHNEIDER with any effectiveness to repel a shark because of the insufficient volume provided by GB 2 176 732 A. Since it is believed that the objection to claim 1 of the present invention has been overcome, Applicant respectfully traverses the rejection of claims 4-6 under 35 U.S.C. 5103(a) as being anticipated by ILER in view of GB 732 A.

Again, this argument is not persuasive because in Schneider column 2, lines 33- 37 it is disclosed that sodium lauryl when mixed with sea water can kill a shark in only small quantities. Because sodium lauryl can kill in small quantities when mixed with sea water, the capacity chamber 11 of the knife of GB 732 can hold an amount of sodium lauryl which is sufficient to kill a shark.

14. Applicant next argues: Claims 7, 8 and 10 were rejected under 35 U.S.C. 103(a) as being unpatentable over SABO in view of KEA and GB 2 176 732 A. If one were to "provide in the pocket or container for shark repellent of SABO a knife similar to that of GB 2 176 732 A," as described by the Examiner, the resulting combination would result in a far different repellent method. Once again, a repellent such as sodium lauryl sulfate would not be able to be used in the

combination of SABO, KEA, and GB 2 176 732 A. However, this repellent has been demonstrated to work in Applicant's invention.

To repeat, this argument is not persuasive because in Schneider column 2, lines 33- 37 it is disclosed that sodium lauryl when mixed with sea water can kill a shark in only small quantities. Because sodium lauryl can kill in small quantities when mixed with sea water, the capacity chamber 11 of the knife of GB 732 can hold an amount of sodium lauryl which is sufficient to kill a shark.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherman D. Basinger whose telephone number is 703-308-1139. The examiner can normally be reached on M-F (6:00-2:30 ET).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel J. Morano can be reached on 703-308-0230. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sherman D. Basinger
Primary Examiner
Art Unit 3617
11/10/04

sdb
11/10/04